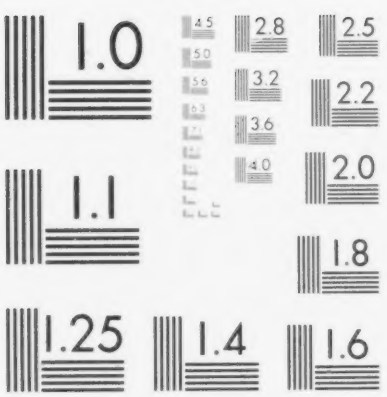
1 OF 1
ED
061 486



DOCUMENT RESUME

ED 061 486 AC 012 494

AUTHOR Long, Huey B.
TITLE A Different Look at the Correlation Coefficient between Dogmatism and Conformity.
PUB DATE Apr 72
NOTE 11p.; Paper presented at the annual Adult Education Research Conference (Chicago, Illinois, April 6-9, 1972)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Authoritarianism; *Conformity; *Correlation; *Dogmatism; Hypothesis Testing; Measurement Instruments; *Personality Assessment; Prisoners; Research Methodology; *Statistical Studies
IDENTIFIERS Asch Vertical Line Scale; Rokeach Dogmatism Scale

ABSTRACT

A study was conducted to determine why the theoretical relationship between dogmatism and conformity had not been verified in correlation studies. The study was designed to study the effect of differing statistical treatments on the coefficient of correlation. Data generated in an experimental framework included conformity scores and dogmatism scores; conformity was determined by use of Asch's Vertical Line Scale and dogmatism was determined by Rokeach's Dogmatism Scale. The dogmatism data were treated in two ways: (1) as a total score, and (2) as individual sub-test scores. Using the total score, a zero order correlation technique was employed to determine the coefficient of correlation between dogmatism and conformity. Such a treatment yielded no significant correlation. Employing the independent scores of 17 sub-test areas of the Dogmatism Scale and a multiple correlation statistical treatment, a significant coefficient of correlation resulted. (Author/DB)

FILMED FROM BEST AVAILABLE COPY

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

ED 061486

A DIFFERENT LOOK AT THE CORRELATION COEFFICIENT BETWEEN DOGMATISM AND CONFORMITY

LONG, Huey B. Associate Professor, Adult Education Dept.
Member, Institute for Community and Area Development
University of Georgia

Previous studies by Crutchfield and Rokeach have provided indirect evidence for assuming that dogmatism and conforming judgment are related. However, studies by Long and Youniss have failed to confirm such a relationship.

This study was designed to study the affect of differing statistical treatments on the coefficient of correlation. Data generated in an experimental framework included conformity scores and dogmatism scores; conformity was determined by use of Asch's Vertical Line Scale and dogmatism was determined by Rokeach's Dogmatism Scale. The dogmatism data were treated in two ways, (1) as a total score and (2) as individual sub-test scores. Using the total score a zero order correlation technique was employed to determine the coefficient of correlation between dogmatism and conformity. Such a treatment yielded no significant correlation. Employing the independent scores of 17 sub-test areas of the Dogmatism Scale and a multiple correlation statistical treatment, a significant coefficient of correlation resulted.

Paper presented at the annual Adult Education Research Conference, Chicago, Illinois, April 6-9, 1972

AC012494

A DIFFERENT LOOK AT THE CORRELATION COEFFICIENT BETWEEN DOGMATISM AND CONFORMITY

Huey B. Long

INTRODUCTION

Several researchers including Rokeach (1960) and Crutchfield (1963) have previously reported a relationship between dogmatism and authoritarianism. Furthermore, data have been provided that indirectly suggest a relationship between conformity and dogmatism. For example, Crutchfield's study cited earlier generated data that revealed a significant relationship between conforming judgment and authoritarianism while Rokeach has reported a significant relationship between dogmatism and authoritarianism (Long, 1968). Others, however, have failed to confirm a direct relationship (Long, 1966, Youniss, 1958).

A variety of explanations have been offered to clarify the apparent contradictions. This writer (1968) suggested that other variables may have influenced the results. Since that time continuing efforts have been made to identify some of the possible variables that may have so influenced the studies.

Problem Statement

The purpose of this study was to determine, if possible, why the theoretical relationship between dogmatism and conformity has failed to be verified in correlation studies. Since one variable that appears to have heretofore been overlooked is the statistical treatment variable and since most

AC012494

studies with which the E is acquainted have been based on a zero order correlation technique, this study was specifically designed to examine the effect of the statistical treatment. More specifically, the study was specifically designed to generate data to illuminate the possibility of a "masking effect" caused by one or more suppressor variables within the dogmatism scale.

Hypotheses

Two major hypotheses (stated in the null form) were tested (at a .05 level of significance) and are reported in this paper. They were:

1. There is no significant relationship between dogmatism and conformity (when a zero order correlation technique is used).

2. There is no significant multiple relationship between dogmatism and conformity.

Experimental Procedures

Briefly stated, the procedures used to collect the data were similar to procedures previously reported by the writer (Long, 1966). Thirty-nine Ss were selected from a maximum security prison in Georgia. They completed Rokeach's Dogmatism Scale and then participated in a two-step procedure to secure conformity data. The two-step procedure includes (1) a pre-test where the Ss made "private" responses to Asch's Vertical Line Scale and other stimuli, and (2) a treatment situation where the Ss made oral, public responses to Asch's Vertical Line Scale following spurious responses made by three confederates (also in-mates at the prison). The Asch Vertical Line Scale

the identification of the 17 sub-test areas included in Rokeach's Dogmatism Scale (Form E).

Sub-tests

The 17 sub-test areas in Rokeach's Dogmatism Scale with the number of items in each sub-test area are described below:

1. Accentuation of differences between belief-disbelief systems - 1 item.
2. The coexistence of contridictions with the belief system - 2 items.
3. Relative degrees of differentiation of the belief-disbelief system - 1 item.
4. Beliefs regarding the aloneness; isolation and helplessness of man - 4 items.
5. Fear of the future - 1 item.
6. A feeling of urgency - 1 item.
7. Compulsive repetition of ideas and arguments - 3 items.
8. Need for martydom - 1 item.
9. Self-aggrandizement as a defense against self-inadequacy - 3 items.
10. Beliefs in positive and negative authority - 2 items.
11. Beliefs in a cause - 7 items.
12. Intolerance toward a renegade - 3 items.
13. Intolerance toward the disbeliever - 4 items.
14. Tendency to make party-time changes - 2 items.
15. Narrowing - 1 item.
16. Attitude toward the past, present, and future - 1 item.
17. Knowing the future - 3 items.

After the Ss completed the dogmatism instrument, 18 scores were computed for each S; including the 17 sub-test scores and a total score. The sub-test scores were obtained by scoring each item in the usual manner, adding the individual item scores within each sub-test and obtaining a mean score. For example, sub-test area II, Belief in a Cause, contains 7 items, one S scored 1, 5, 5, 5, 6, 6, and 7 on these items for a total sub-test score of 35 or a mean sub-test score of 5. The above S thus had 17 such scores plus a total dogmatism score of 180.

Findings

Hypothesis 1 - There is no significant relationship between dogmatism and conformity, (when a zero order correlation technique is used).

Data generated by the study included a mean conformity score of 14.538 and a mean dogmatism score of 161.589. Standard deviations were 8.999 and 46.022 respectively.

Data analysis produced a zero order coefficient of correlation of 0.168. With 39 Ss the coefficient failed to reach significance, hence the E failed to reject the null hypothesis.

Hypothesis 2 - There is no significant multiple relationship between dogmatism and conformity.

Using the mean score of the 17 sub-test areas to determine the coefficient of multiple correlation the data analysis produced a multiple correlation of 0.835. Due to small sample size, a correction, as suggested by Garrett (1965), was applied to the coefficient in case of inflation. The correction factor reduced the coefficient to 0.42, which however is significant.

Thus, based on the above statistical treatment the E rejected the null hypothesis.

Discussion

Based on the data reported above, there appears to be an important difference between results generated by the two correlation treatments. The importance of the difference is clearly reflected by the results that appear to be contradictory. In the first instance, when a zero order correlation technique was used, no significant correlation was found. In contrast the multiple correlation treatment generates a significant correlation.

Table 1 here.

Data in Table 1 illustrates the contributions of each sub-test area. Figure 2 illustrates how the sub-tests interact to reduce the zero order coefficient.

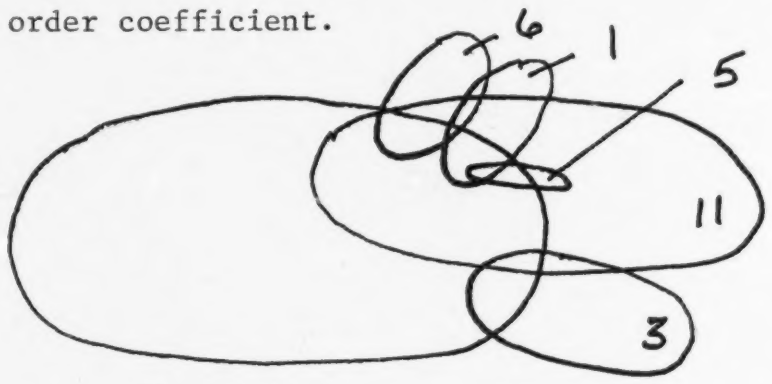


Figure 2

In Figure 2 the sub-tests are 1, 3, 5, 6, 11. Of these 1, 6, 11 directly contribute to the zero order correlation in differing amounts with 3 and 5 acting as suppressors on the total correlation and also negatively correlated with sub-test 11. Sub-test 1 and 6 are positively correlated with sub-test 11 and conformity while negatively correlated with each other; sub-tests 1 and 5 are also negatively related while 3 and 5 are positively related. The two dimensional nature of Figure 2 prevents an accurate representation of the suppressor concept at work. But the above appears to illustrate the basic idea.

Instrument design theory indicates that the suppressor concept can be instrumentally employed in two different ways to improve the validity of a test battery. The ways are:

1) By taking out some of the yet as unmeasured part of the criterion. Such a test will show a high correlation with the criterion but relatively low correlation with other tests in the battery. Figure 3 illustrates the idea.

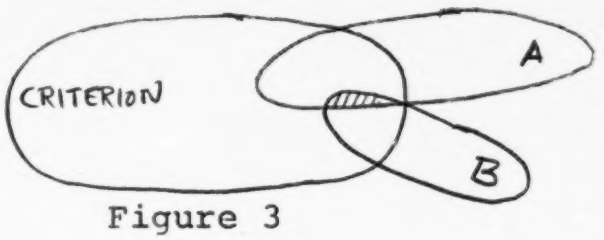


Figure 3

2) A test may also add to the validity of a battery by acting as a suppressor variable on another test.

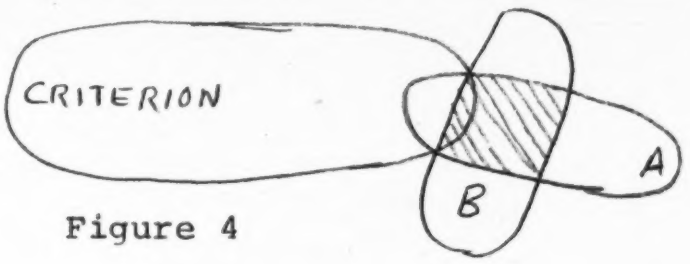


Figure 4

Use of, and interpretation of, results generated by studies using such batteries may subsequently be affected by knowledge of how the tests within a battery correlate with each other as well as the criterion. Knowledge of such relationships would appear to be especially valuable when the criterion has been modified from the original. For example, the sub-tests making up Rokeach's Dogmatism Scale were carefully selected to identify dogmatism, not conformity. Thus, tests used to develop an instrument that measures dogmatism appear to serve as suppressors when the instrument is viewed as an index to conformity. Thus, the lack of significant correlation between zero order coefficients of correlation reported in previous studies may be explained. Furthermore, the significant correlation between conformity and the F scale reported by Crutchfield (1963, p. 403) may be influenced by sub-test batteries that are also related to Dogmatism sub-test batteries. Further study of the sub-test of the two instruments would appear to be instructive.

Conclusions and Summary

The results of this study appear to explain how dogmatism and authoritarianism may be related and how authoritarianism and conformity may be related and yet how dogmatism and conformity may not be related. However, the explanation of the difference in methodological terms does not close the door to further inquiry. Actually, the findings reported in this study seem to open the door to additional inquiry into such concerns as (1) the relationship of the seven sub-tests (11,

3, 6, 1, 7, 2, 12) to the Authoritarianism F Scale and (2) can conformity be predicted by the seven dogmatism sub-test scores that are related to dogmatism when a multiple correlation is used?

In summary, this study was designed to determine, if possible, why the theoretical relationship between dogmatism and conformity has failed to be verified in correlation studies. A sample of 39 in-mates in a correctional institution was used to collect dogmatism and conformity data. The data were subsequently examined by two correlation techniques, the zero order correlation and a multiple correlation.

As a result of the statistical analysis it appears that seven sub-test areas, in the 17 sub-tests that constitute Rokeach's Dogmatism Scale, have a multiple correlation of .81 with conformity and account for .65 of the variance. When a zero order correlation based on the total Dogmatism Score was obtained the coefficient failed to reach significance at the .05 level.

Table 1

Correlation Coefficients, Dogmatism Sub-tests and Conformity

STEP NUMBER	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	MULTIPLE RSQ	INCREASE IN RSQ
1	11		0.5636	0.3176	0.3176
2	3		0.6252	0.3909	0.0733
3	6		0.7037	0.4952	0.1043
4	1		0.7520	0.5656	0.0703
5	7		0.7795	0.6076	0.0420
6	2		0.7961	0.6337	0.0261
7	12		0.8086	0.6538	0.0201
8	5		0.8139	0.6624	0.0086
9	16		0.8198	0.6721	0.0097
10	4		0.8261	0.6825	0.0104
11	15		0.8301	0.6890	0.0065
12	10		0.8316	0.6916	0.0026
13	13		0.8340	0.6956	0.0040
14	8		0.8348	0.6969	0.0014
15	17		0.8355	0.6981	0.0011
16	9		0.8357	0.6984	0.0003

References

Crutchfield, Richard S., "Conformity and Character", in (Ed.) E. P. Hallander and Raymond G. Hunt, Current Perspectives in Social Psychology, New York: Oxford University Press, 1963.

Garrett, Henry E., Statistics in Psychology and Education, New York, David McKay, 1965.

Long, Huey B., "Relationships Between Conforming Judgment and Employee Rank and Between Conforming Judgment and Dogmatism in an Employment Group", (unpublished Ph. D. dissertation, Florida State University, Tallahassee, Florida), 1966.

Long, Huey B., "Factors Influencing the Relationship Between Dogmatism and Conformity in an Employee Group", The Journal of Social Psychology, 74, 1968.

Rokeach. Milton, The Open and Closed Mind, New York: Basic Books, Inc., 1960.

Youniss, R. P., Conformity to Group Judgments in its Relation to the Structure of the Stimulus Situation and Certain Personality Variables, Washington, D. C., Catholic University Press, 1959.

ERIC Clearinghouse

MAY 8 1972

on Adult Education